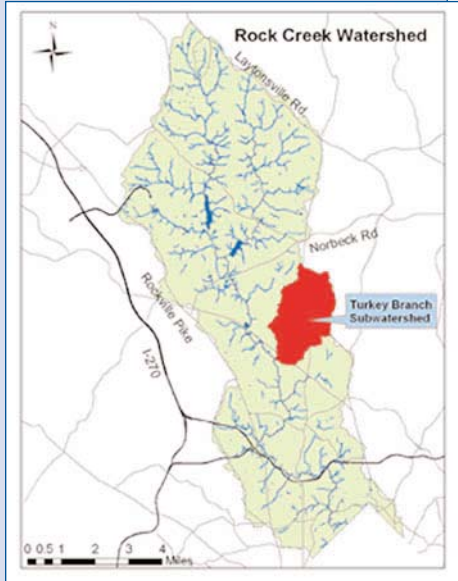
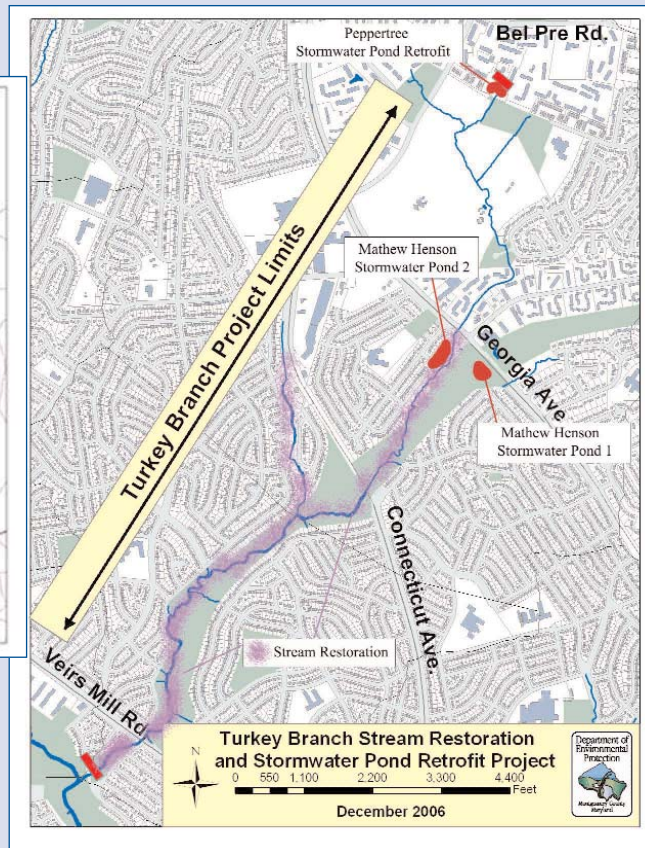


Watershed Restoration FACTSHEET:

Turkey Branch Project



The Rock Creek Watershed, a tributary of the Potomac River, includes a drainage area of 60 square miles. Rock Creek flows 21 miles through central Montgomery County, east of I-270, then continues into the District of Columbia.



Turkey Branch Subwatershed Facts:

Subwatershed Drainage Area: 2,412 Acres, 3.8 square miles

Subwatershed Imperviousness: 32%

Property Ownership: Private, State of Maryland, and Maryland-National Capital Park and Planning Commission

Restoration Goals:

To stabilize eroding stream banks, re-establish a riparian buffer, protect sewer lines, repair existing stormdrains, capture stormwater flows, and improve aquatic habitat conditions.

Stream Restoration Project Facts:

Project Length: 3.6 miles

Costs: Structural (\$3,379,710)

Reforestation (\$104,771)

Funded in part through the Maryland State Highway Administration TEA-21 Enhancement Program, administered by the Federal Highway Administration.

Project Status: Construction

Estimated Start Date: January 22, 2007

Estimated Completion Date: Late Winter, 2007

Stream Monitoring Facts:

Pre and Post Restoration Monitoring will be conducted following MCDEP Monitoring Protocols.

For technical and professional specifications, visit www.montgomerycountymd.gov/dep

Project Selection

In April 2001, the Rock Creek Watershed Feasibility Study evaluated over 14 miles of stream in the watershed. Twenty-three stream restoration sites were then identified and prioritized, based on stream habitat and water quality data. Sites were then further ranked according to criteria such as cost of work-needed, access to site, impact on wetlands, reforestation potential, and extent of severe erosion. Turkey

Branch was among those sites chosen for restoration.

The Rock Creek Watershed Restoration Action Plan (RCWRAP) summarizes the results of the Feasibility Study, and describes general goals of watershed restoration as well as specific stream restoration and storm water management projects. The Action Plan is available on the Montgomery County Department of Environmental Protection, Division of Watershed

Management, website at www.montgomerycountymd.gov/dep or by contacting DEP-WMD at 240-777-7712.

Pre-Restoration Conditions

Much of the Lower Rock Creek Watershed, including Turkey Branch subwatershed, was developed prior to regulations requiring stormwater management control, and contains a high percentage of

impervious surface ⁹.

The Rock Creek Watershed Feasibility Study identified several impaired conditions in Turkey Branch. Uncontrolled stormwater created severely unstable banks, undercut trees, and damaged private property. Undercut trees fell into the stream and created debris jams that blocked the stream and caused further bank erosion.


Over time, the stream channel down-cut ⁹ and overwidened, which limited the

stream's access to the original floodplain, exposed sewer lines to potential damage, and destroyed habitat necessary for diverse aquatic life. Sediment from eroded banks and road grit accumulated in the stream, further degrading stream habitat conditions.

Restoration Actions

In an effort to reverse impacts from uncontrolled runoff, the County is building two new stormwater management ponds near Georgia

Avenue and upgrading an existing stormwater management pond east of Pear Tree Lane.


Another component of the Turkey Branch Project focuses on protecting sewer crossings and stabilizing the eroded stream channel, thereby improving stream conditions and creating better habitat for fish and other aquatic organisms. One of the techniques used to stabilize the stream is rock and log vanes,  which direct water away from unsta-



The eroding stream banks of Turkey Branch are threatening the stream-side vegetation, including large rooted trees (above).





The upper photo depicts Turkey Branch streambank eroding away due to high uncontrolled stormwater. The lower photo is the Peppertree Stormwater pond prior to the planned retrofit which will improve water quality.

ble stream banks and form downstream scour pools, providing good habitat for fish. Rock cross vanes  also function as grade control, which slow the erosive process of stream down-cutting.

The project will help save undercut streambank trees by using a method called "rock packing." Seriously damaged trees will be flush cut, allowing the root system to remain in the bank for stabilization. Other efforts to enhance riparian habitat and buffer include planting more than 15,000

native trees, shrubs, and wetland plants.

DEP has contracted the United States Geological Survey (USGS), with the assistance and support of Montgomery County's County Council, to install and maintain a real-time flow gage to better understand the relationship between rainfall and stream flow in this urban watershed. To view the data from this flow gage, visit: <http://waterdata.usgs.gov/nwis/uv?01647850>. 

 follow web link for more information

 see online glossary www.montgomerycountymd.gov/dep/watershed_glossary.htm

January 2007

For more information:



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